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AMENDMENT

Attorney Docket No.: Case 7028

Patent Application Serial No. 10/829,514
Reply to Office Action of May 9, 2006

Amendments to the Specification

Please add the following new paragraph after paragraph [0019]:

[0019.1] FIG. 3 is a schematic representation of an embodiment of the present invention wherein the sleeve contains more than one split along its longitudinal axis.

Please replace paragraph [0020] with the following amended paragraph:

[0020] Referring to FIGS. 1, and 2, and 3, tube 40 is inserted into an external sleeve 30. The external sleeve 30 is generally cylindrical, and is split 14 along its longitudinal axis in a direction parallel to the tube bend plane to create an inner sleeve portion 30', located adjacent the tube intrados (the inside radius of the tube bend), and an outer sleeve portion 30" adjacent the tube extrados (the external radius of the bend). The sleeve length is based on the arc length of the neutral axis of the bend plus a nominal clamping allowance. The outside diameter of the sleeve is selected to match the next standard O.D. size of tubes. For example if a 2" O.D. tube is being bent, a 2 1/4" O.D. sleeve would generally be selected, or if a 2 1/4" O.D. tube is being bent a 2 1/2" O.D. sleeve would generally be selected. It is understood that one skilled in the art may utilize other tube and sleeve O.D. combinations in a manner allowing existing tooling to be used.

Please replace paragraph [0024] with the following amended paragraph:

[0024] In another embodiment the sleeve may contain one 14 or more splits 15

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along its longitudinal axis. A longitudinal split 14 in the sleeve allows the intrados portion of the sleeve to move independently from the extrados portion of the sleeve upon bending, thus lowering the compressive stresses within in the intrados, resulting in reduced intrados wall thickening. Further, the independent movement of the extrados portion of the sleeve lowers the tensile load applied to the extrados of the bend upon bending, thereby reducing the occurrence of wall thinning. These two advantages of the invention combine to reduce or eliminate the need for a wiper die and internal mandrel.